

PATENT ABSTRACTS OF JAPAN

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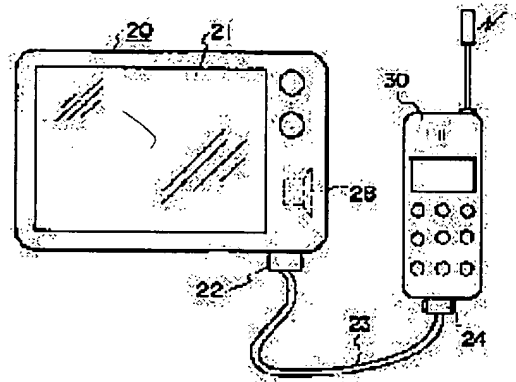
(72)Inventor : KEZUKA EMIKO

(54) PERSONAL EQUIPMENT

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a personal equipment, in which a desired incoming call tone is selected among diversified and various incoming call tones and which easily changes the incoming call tone.

SOLUTION: A personal information terminal equipment 20 has a selection means that selects a desired tone by the user among various and diversified incoming call tone stored in a center server, a communication equipment (a portable telephone set in this embodiment) 30 that downloads music data of the incoming call tone selected by the selection means from the center server via a network, a music data memory that stores the music data obtained from the communication equipment 30, and a tone generating circuit that generates the incoming call tone according to the music data stored in the music data memory.



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CLAIMS

[Claim(s)]

[Claim 1] The personal device characterized by providing a selection means for a user choosing a desired sound from two or more ringer tones stored in the pin center, large server, the means of communications for obtaining the music data of the ringer tone chosen by this selection means from said pin center, large server through a communication network, and a pronunciation means to pronounce a ringer tone according to the music data obtained from this means of communications.

[Claim 2] The personal device according to claim 1 characterized by providing further a music data storage means to memorize everlastingly the music data obtained from said means of communications.

[Claim 3] The personal device characterized by providing a pronunciation means to pronounce a ringer tone according to the music data concerned while being attached free [attachment and detachment] to the main frame, being prepared in the music box chip equipped with the music data carrier with which the music data of a ringer tone were recorded, and the main frame and reading music data from the music data carrier of said music box chip.

[Claim 4] The personal device characterized by providing the music box chip equipped with the music data carrier with which it was attached free [attachment and detachment] to the main frame, and the music data of a ringer tone were recorded, and a pronunciation means to pronounce a ringer tone according to the music data concerned while reading music data from the music data carrier concerned.

[Claim 5] The music data of said ringer tone are a personal device given in either claim 1 characterized by being data which define either the height of a sound, strength and merits and demerits at least, 2, 3 or 4.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the personal device which can use a personal information terminal (PDA: Personal Digital Assistance) or a portable telephone, mainly carrying.

[0002]

[Description of the Prior Art] In this kind known from the former of personal device, it has the so-called notice function of arrival of the mail which notifies the notice of arrival of the mail of an electronic mail to the user of the device concerned, or the notice of arrival of the mail of a pager call by audible sound. The function concerned includes the notice function of arrival of the mail by vibration (vibration) in the wide sense more.

[0003] In a situation many whose owners of the personal device of the same model are in a perimeter especially when using this kind of personal device outdoors, the same ringer tone will ring also in which owner's device. Therefore, in the case of arrival of the mail, it is hard to distinguish whether which device has rung. Then, two or more sorts of ringer tones are incorporated beforehand, and it enables it to change a ringer tone by choosing the class of ringer tone from the inside by the conventional personal device.

[0004]

[Problem(s) to be Solved by the Invention] There are the following troubles in the conventional personal device which was mentioned above. That is, the class of ringer tone with a selectable user will be limited to what was beforehand incorporated according to the type of specification etc. For this reason, there is a trouble that a request cannot be accepted from the user who wants to use a situation or the various ringer tones according to taste.

[0005] Therefore, a user can choose a desired sound out of various ringer tones, and this invention aims at providing the selected ringer tone with the personal device which can be changed easily.

[0006]

[Means for Solving the Problem] The above-mentioned technical problem was solved, and in order to attain the purpose, the personal device of this invention is equipped with the following means.

(1) The personal device of this invention is characterized by providing a selection means for a user choosing a desired sound from two or more ringer tones stored in the pin center, large server, the means of communications for obtaining the music data of the ringer tone chosen by this selection means from said pin center, large server through a communication network, and a pronunciation means to pronounce a ringer tone according to the music data obtained from this means of communications.

[0007] According to this configuration, the music data of a user's favorite ringer tone chosen by the selection means can be obtained from a pin center, large server through means of communications. And pronunciation of a ringer tone is performed by the pronunciation means according to the obtained music data. That is, it becomes possible to choose various ringer tones acquirable from a pin center, large server, and to change easily. In addition, the thing which memorize temporarily the music data obtained from means of communications and for which it has volatile memory, for example is desirable.

(2) The personal device of this invention is characterized by providing further a music data storage means to memorize everlastingly the music data which are equipment given in the above (1), and were obtained from said means of communications.

[0008] Since the music data downloaded from the pin center, large server are everlastingly memorizable according to this configuration, when pronouncing the same ringer tone repeatedly, it is not necessary to obtain music data from a pin center, large server each time.

(3) It is characterized by providing a pronunciation means to pronounce a ringer tone according to the music data concerned while the personal device of this invention is attached free [attachment and detachment] to the main frame, is prepared in the music box chip equipped with the music data carrier with which the music data of a ringer tone were recorded, and the main frame and reads music data from the music data carrier of said music box chip.

[0009] According to this configuration, a user can prepare a favorite music box chip by offering a variety of music box chips equipped with the music data carrier with which the music data of a different ringer tone were recorded. To a body, since the music box chip is easily removable, it can use a favorite ringer tone properly by handiness comparable as a changing battery.

(4) The personal device of this invention is attached free [attachment and detachment] to the main frame, and it is characterized by providing the music box chip equipped with a pronunciation means to pronounce a ringer tone according to the music data concerned while it reads music data from the music data carrier with which the music data of a ringer tone were recorded, and the music data carrier concerned.

[0010] According to this configuration, a user can prepare a favorite music box chip by offering a variety of music box chips equipped with the pronunciation ***** means in a ringer tone in a different tone according to this music data from the music data carrier with which the music data of a different ringer tone were recorded. To a body, since the music box chip is easily removable, it can use a favorite ringer tone properly by handiness comparable as a changing battery.

[0011]

[Embodiment of the Invention] Hereafter, the operation gestalt of the personal device of this invention is explained, referring to a drawing.

(The 1st operation gestalt) Drawing 1 is drawing showing the appearance of the personal device concerning the 1st operation gestalt of this invention. The personal information terminal (PDA: Personal Digital Assistance) 20 and portable telephone 30 which were mentioned above are connected through connectors 22 and 24 and a cable 23, and the personal device of this operation gestalt is constituted. The personal information terminal 20 has the pen touch screen 21, through this screen 21, it is highly efficient and the high user interface of operability is realized.

[0012] The function for managing individual humanity news efficiently and the so-called PIM function are carried in this personal information terminal 20. The PIM function concerned consists of various functions, such as task schedule management, an easy customer database, and an electronic mail. The equipment 20 of this operation gestalt has the notice function of arrival of the mail for audible sound to notify the notice of arrival of the mail of new mail in the electronic mail function especially. Therefore, the loudspeaker 28 for making a ringer tone sing is built in.

[0013] Drawing 2 is the block diagram showing the outline configuration of the personal device concerning the 1st operation gestalt of this invention. A selection means for the personal information terminal unit 20 to choose the sound of a request of a user from the various ringer tones stored in the pin center, large server 50 (un-illustrating), The communication device 30 for downloading the music data of the ringer tone chosen by this selection means from the pin center, large server 50 through a network (here a mobile radiotelephone network, a cellular-phone network) (here portable telephone), It has the music data memory 25 which memorizes temporarily the music data obtained from this communication device 30 and which consists of volatile memory, for example, and the pronunciation circuit 29 which pronounces a ringer tone according to the music data memorized by this music data memory 25. CPU26 manages actuation of the whole equipment. In addition, you may have a music data storage means to memorize everlastingly the music data obtained from the pin center, large server 50. In this case, when

pronouncing the same ringer tone repeatedly, there is an advantage that it is not necessary to obtain music data from the pin center,large server 50 each time.

[0014] The software which can be performed by CPU26 realizes and, thereby, the above-mentioned selection means can display the list of selectable various ringer tones (favorite melody) on the pin center,large server 50 through the pen touch screen 21. Looking at a display here, a user can operate the screen 21 concerned and can choose a desired ringer tone.

[0015] The music data downloaded through a communication device 30 from the pin center,large server 50 are a thing of each sound which constitutes a ringer tone which defines either height, strength and merits and demerits at least. However, when making the quality of a ringer tone, and a class comparatively simple, only height (pitch) of a sound may be used as music data, and, thereby, reduction of the amount of data may be aimed at.

[0016] According to this operation gestalt constituted as mentioned above, the music data of a user's favorite ringer tone chosen by the selection means download through a communication device 30 from the pin center,large server 50, and storage maintenance is carried out at the music data memory 25. And the music data memorized by the music data memory 25 by the pronunciation circuit 20 are read, and pronunciation of a ringer tone is performed according to the data concerned. That is, the thing which can be downloaded from the pin center,large server 50 and which it restricts, and various ringer tones are chosen and is changed easily becomes possible.

[0017] For this reason, the class of ringer tone with a selectable user is not limited to what was beforehand incorporated according to that type of specification etc., and a request can be accepted from the user who wants to use a situation or the various ringer tones according to taste.

[0018] Therefore, a user can choose a desired sound out of various ringer tones, and the selected ringer tone can be easily provided with the personal device which can be changed. In addition, the individual humanity news terminal unit 20 is not limited to the above-mentioned configuration. For example, it considers as the configuration directly linked with instead of [which does not possess a communication device 30] through connectors 22 and 24 and a cable 23 to a server 40, and you may make it transmit music data with a cable from this server 40, as shown in drawing 3 .

[0019] (The 2nd operation gestalt) Drawing 4 is drawing showing the appearance of the personal device concerning the 2nd operation gestalt of this invention. As shown in this drawing, the personal device of this operation gestalt is constituted by the individual humanity news terminal unit 10 which has the pen touch screen 11 and has the PIM function to use the same user interface as a thing and the interface concerned of the 1st operation gestalt.

[0020] Unlike the 1st operation gestalt, the individual humanity news terminal unit 10 of this operation gestalt does not possess the communication device for downloading the music data of a ringer tone from a pin center,large server etc. Instead, it has the terminating signal pronunciation section (music box chip) 12 which was removable free and built in the loudspeaker 15 to the individual humanity news terminal unit 10 concerned.

[0021] Drawing 5 is the block diagram showing the outline configuration of the individual humanity news terminal unit 10. As shown in this drawing, the individual humanity news terminal unit 10 has the composition that the music box chip 12 which consists of music data ROM 13 which are a music data carrier, and a pronunciation circuit 15 containing a loudspeaker is connected free [attachment and detachment] to the Maine base 14.

[0022] Thus, according to this constituted operation gestalt, a variety of music box chips 12 which can pronounce the ringer tone of a different tone according to a different ringer tone, i.e., different music data, can be offered easily, and a user can choose the favorite music box chip 12. To a body, since the music box chip 12 is easily removable, it can use a favorite ringer tone properly by handiness comparable as a changing battery. For example, a soft ringer tone is used for Nighttime when the child is sleeping, and when coming out to the outdoors, the directions of substituting for the thing of a powerful sound are realized.

[0023] In addition, the pronunciation circuit 15 in the above-mentioned music box chip 12 may be established in the main frame side including the Maine base 14. In this case, although the tone of a

ringer tone etc. is limited to the pronunciation circuit 15, the cost of the music box chip 12 is mitigable. [0024] In this way, according to the 2nd operation gestalt, the class of ringer tone with a selectable user is not limited to what was beforehand incorporated according to the type of specification etc., and can accept a request from the user who wants to use a situation or the various ringer tones according to taste. [as well as the 1st operation gestalt]

[0025] Therefore, a user can choose a desired sound out of various ringer tones, and the selected ringer tone can be easily provided with the personal device which can be changed. In addition, this invention cannot be limited to the operation gestalt mentioned above, but can deform variously, and can be carried out.

[0026]

[Effect of the Invention] As explained above, according to this invention, a user can choose a desired sound out of various ringer tones, and the selected ringer tone can be easily provided with the personal device which can be changed.

[Translation done.]

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TECHNICAL FIELD

[Field of the Invention] This invention relates to the personal device which can use a personal information terminal (PDA: Personal Digital Assistance) or a portable telephone, mainly carrying.

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PRIOR ART

[Description of the Prior Art] In this kind known from the former of personal device, it has the so-called notice function of arrival of the mail which notifies the notice of arrival of the mail of an electronic mail to the user of the device concerned, or the notice of arrival of the mail of a pager call by audible sound. The function concerned includes the notice function of arrival of the mail by vibration (vibration) in the wide sense more.

[0003] In a situation many whose owners of the personal device of the same model are in a perimeter especially when using this kind of personal device outdoors, the same ringer tone will ring also in which owner's device. Therefore, in the case of arrival of the mail, it is hard to distinguish whether which device has rung. Then, two or more sorts of ringer tones are incorporated beforehand, and it enables it to change a ringer tone by choosing the class of ringer tone from the inside by the conventional personal device.

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EFFECT OF THE INVENTION

[Effect of the Invention] As explained above, according to this invention, a user can choose a desired sound out of various ringer tones, and the selected ringer tone can be easily provided with the personal device which can be changed.

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] There are the following troubles in the conventional personal device which was mentioned above. That is, the class of ringer tone with a selectable user will be limited to what was beforehand incorporated according to the type of specification etc. For this reason, there is a trouble that a request cannot be accepted from the user who wants to use a situation or the various ringer tones according to taste.

[0005] Therefore, a user can choose a desired sound out of various ringer tones, and this invention aims at providing the selected ringer tone with the personal device which can be changed easily.

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MEANS

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[0007] According to this configuration, the music data of a user's favorite ringer tone chosen by the selection means can be obtained from a pin center, large server through means of communications. And pronunciation of a ringer tone is performed by the pronunciation means according to the obtained music data. That is, it becomes possible to choose various ringer tones acquirable from a pin center, large server, and to change easily. In addition, the thing which memorize temporarily the music data obtained from means of communications and for which it has volatile memory, for example is desirable.

(2) The personal device of this invention is characterized by providing further a music data storage means to memorize everlastingly the music data which are equipment given in the above (1), and were obtained from said means of communications.

[0008] Since the music data downloaded from the pin center, large server are everlastingly memorizable according to this configuration, when pronouncing the same ringer tone repeatedly, it is not necessary to obtain music data from a pin center, large server each time.

(3) It is characterized by providing a pronunciation means to pronounce a ringer tone according to the music data concerned while the personal device of this invention is attached free [attachment and detachment] to the main frame, is prepared in the music box chip equipped with the music data carrier with which the music data of a ringer tone were recorded, and the main frame and reads music data from the music data carrier of said music box chip.

[0009] According to this configuration, a user can prepare a favorite music box chip by offering a variety of music box chips equipped with the music data carrier with which the music data of a different ringer tone were recorded. To a body, since the music box chip is easily removable, it can use a favorite ringer tone properly by handiness comparable as a changing battery.

(4) The personal device of this invention is attached free [attachment and detachment] to the main frame, and it is characterized by providing the music box chip equipped with a pronunciation means to pronounce a ringer tone according to the music data concerned while it reads music data from the music data carrier with which the music data of a ringer tone were recorded, and the music data carrier concerned.

[0010] According to this configuration, a user can prepare a favorite music box chip by offering a variety of music box chips equipped with the pronunciation ***** means in a ringer tone in a different tone according to this music data from the music data carrier with which the music data of a different ringer tone were recorded. To a body, since the music box chip is easily removable, it can use a favorite ringer tone properly by handiness comparable as a changing battery.

[0011]

[Embodiment of the Invention] Hereafter, the operation gestalt of the personal device of this invention is explained, referring to a drawing.

(The 1st operation gestalt) Drawing 1 is drawing showing the appearance of the personal device concerning the 1st operation gestalt of this invention. The personal information terminal (PDA:Personal Digital Assistance) 20 and portable telephone 30 which were mentioned above are connected through connectors 22 and 24 and a cable 23, and the personal device of this operation gestalt is constituted. The personal information terminal 20 has the pen touch screen 21, through this screen 21, it is highly efficient and the high user interface of operability is realized.

[0012] The function for managing individual humanity news efficiently and the so-called PIM function are carried in this personal information terminal 20. The PIM function concerned consists of various functions, such as task schedule management, an easy customer database, and an electronic mail. The equipment 20 of this operation gestalt has the notice function of arrival of the mail for audible sound to notify the notice of arrival of the mail of new mail in the electronic mail function especially. Therefore, the loudspeaker 28 for making a ringer tone sing is built in.

[0013] Drawing 2 is the block diagram showing the outline configuration of the personal device concerning the 1st operation gestalt of this invention. A selection means for the personal information terminal unit 20 to choose the sound of a request of a user from the various ringer tones stored in the pin center,large server 50 (un-illustrating), The communication device 30 for downloading the music data of the ringer tone chosen by this selection means from the pin center,large server 50 through a network (here a mobile radiotelephone network, a cellular-phone network) (here portable telephone), It has the music data memory 25 which memorizes temporarily the music data obtained from this communication device 30 and which consists of volatile memory, for example, and the pronunciation circuit 29 which pronounces a ringer tone according to the music data memorized by this music data memory 25. CPU26 manages actuation of the whole equipment. In addition, you may have a music data storage means to memorize everlastingly the music data obtained from the pin center,large server 50. In this case, when pronouncing the same ringer tone repeatedly, there is an advantage that it is not necessary to obtain music data from the pin center,large server 50 each time.

[0014] The software which can be performed by CPU26 realizes and, thereby, the above-mentioned selection means can display the list of selectable various ringer tones (favorite melody) on the pin center,large server 50 through the pen touch screen 21. Looking at a display here, a user can operate the screen 21 concerned and can choose a desired ringer tone.

[0015] The music data downloaded through a communication device 30 from the pin center,large server 50 are a thing of each sound which constitutes a ringer tone which defines either height, strength and merits and demerits at least. However, when making the quality of a ringer tone, and a class comparatively simple, only height (pitch) of a sound may be used as music data, and, thereby, reduction of the amount of data may be aimed at.

[0016] According to this operation gestalt constituted as mentioned above, the music data of a user's favorite ringer tone chosen by the selection means download through a communication device 30 from the pin center,large server 50, and storage maintenance is carried out at the music data memory 25. And the music data memorized by the music data memory 25 by the pronunciation circuit 20 are read, and pronunciation of a ringer tone is performed according to the data concerned. That is, the thing which can be downloaded from the pin center,large server 50 and which it restricts, and various ringer tones are chosen and is changed easily becomes possible.

[0017] For this reason, the class of ringer tone with a selectable user is not limited to what was beforehand incorporated according to that type of specification etc., and a request can be accepted from the user who wants to use a situation or the various ringer tones according to taste.

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[0020] Unlike the 1st operation gestalt, the individual humanity news terminal unit 10 of this operation gestalt does not possess the communication device for downloading the music data of a ringer tone from a pin center, large server etc. Instead, it has the terminating signal pronunciation section (music box chip) 12 which was removable free and built in the loudspeaker 15 to the individual humanity news terminal unit 10 concerned.

[0021] Drawing 5 is the block diagram showing the outline configuration of the individual humanity news terminal unit 10. As shown in this drawing, the individual humanity news terminal unit 10 has the composition that the music box chip 12 which consists of music data ROM 13 which are a music data carrier, and a pronunciation circuit 15 containing a loudspeaker is connected free [attachment and detachment] to the Maine base 14.

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[0024] In this way, according to the 2nd operation gestalt, the class of ringer tone with a selectable user is not limited to what was beforehand incorporated according to the type of specification etc., and can accept a request from the user who wants to use a situation or the various ringer tones according to taste. [as well as the 1st operation gestalt]

[0025] Therefore, a user can choose a desired sound out of various ringer tones, and the selected ringer tone can be easily provided with the personal device which can be changed. In addition, this invention cannot be limited to the operation gestalt mentioned above, but can deform variously, and can be carried out.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] Drawing showing the appearance of the personal device concerning the 1st operation gestalt of this invention.

[Drawing 2] The block diagram showing the outline configuration of the personal device concerning the 1st operation gestalt of this invention.

[Drawing 3] Drawing showing the appearance of other examples of a configuration of the personal device concerning the 1st operation gestalt of this invention.

[Drawing 4] Drawing showing the appearance of the personal device concerning the 2nd operation gestalt of this invention.

[Drawing 5] The block diagram showing the outline configuration of the personal device concerning the 2nd operation gestalt of this invention.

[Description of Notations]

10 20 -- Individual humanity news terminal unit

11 21 -- Pen touch screen

12 -- Music box chip

13 -- Music data ROM

14 -- Main base

15 -- Pronunciation circuit (loudspeaker)

22 24 -- Connector

23 -- Cable

25 -- Music data memory

26 -- CPU

29 -- Pronunciation circuit

30 -- Communication device (portable telephone)

50 -- Pin center, large server

[Translation done.]

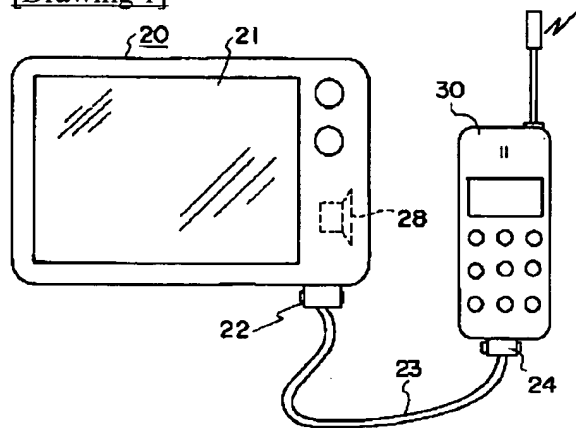
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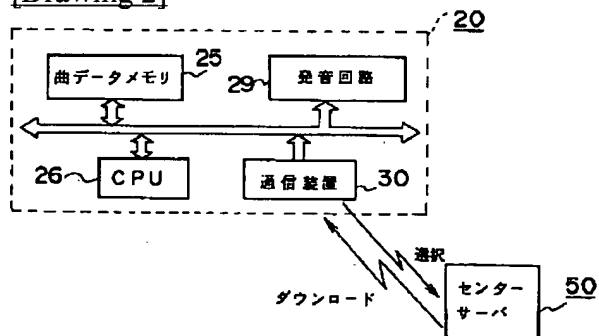
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DRAWINGS

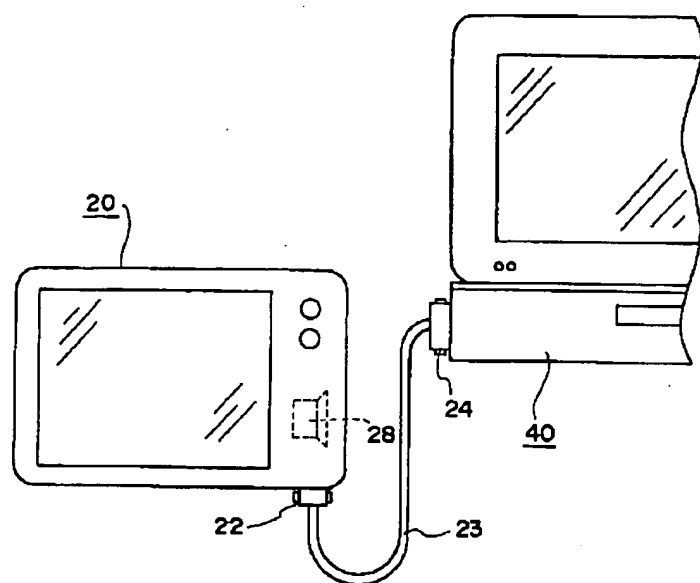
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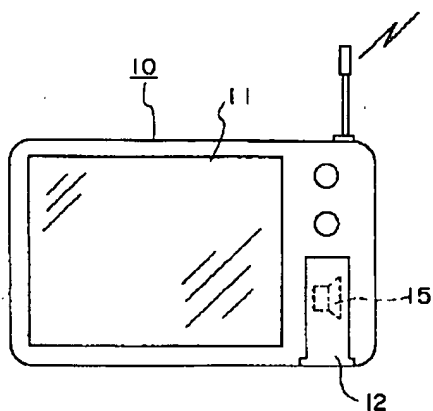
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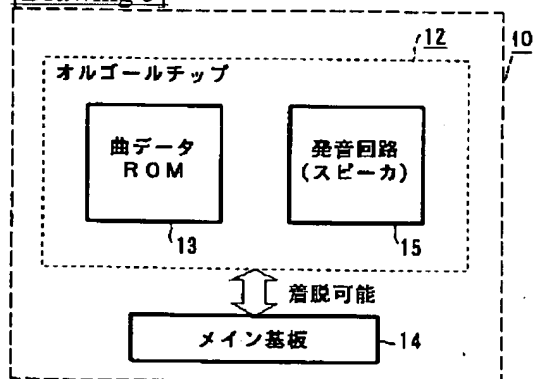
[Drawing 3]



[Drawing 4]
[図 4]



[Drawing 5]



[Translation done.]

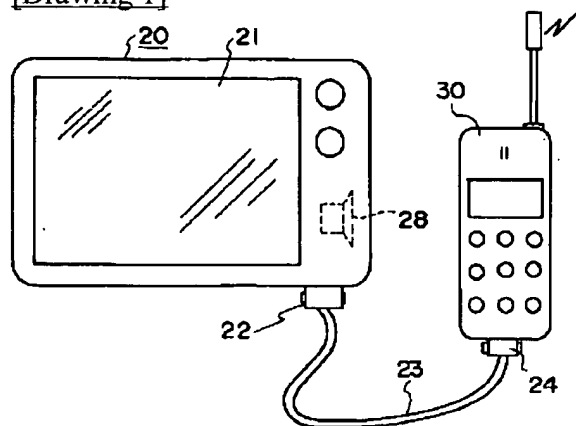
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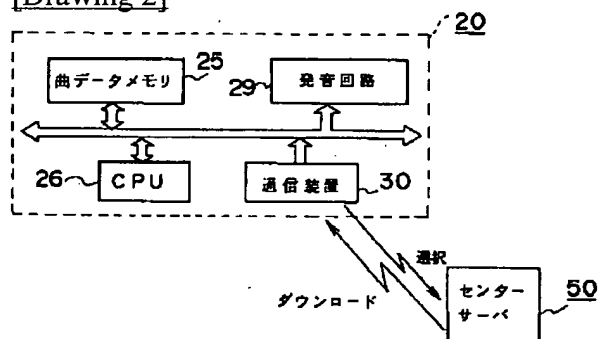
1. This document has been translated by computer. So the translation may not reflect the original precisely.
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DRAWINGS

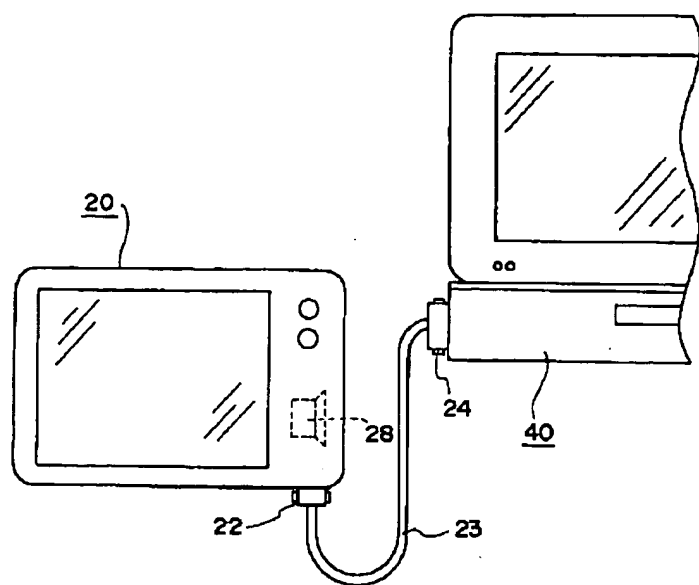
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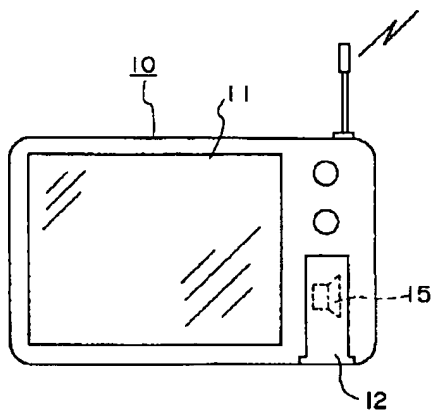
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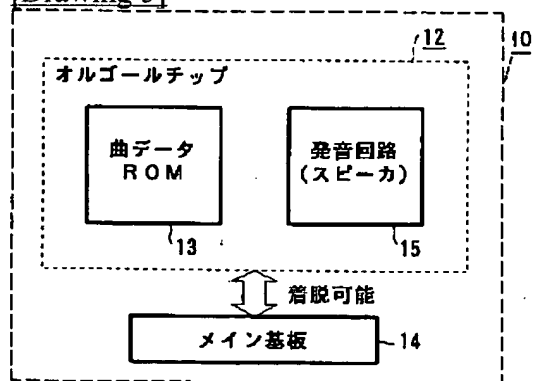
[Drawing 3]



[Drawing 4]
【図 4】



[Drawing 5]



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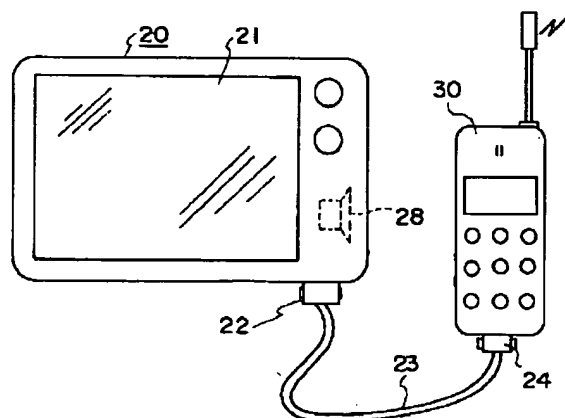
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(54)【発明の名称】 個人用機器

(57)【要約】

【課題】本発明は多種多様な着信音のなかから所望の音を利用者が選択することができ、選択された着信音に容易に変更可能な個人用機器を提供することを目的とする。

【解決手段】個人用情報端末装置20は、センターサーバに格納された多種多様な着信音のなかから利用者が所望の音を選択するための選択手段と、この選択手段により選択された着信音の曲データを、ネットワークを介してセンターサーバからダウンロードするための通信装置(ここでは携帯電話機)30と、この通信装置30から得られた曲データを記憶する曲データメモリと、この曲データメモリに記憶された曲データに従い、着信音を発音する発音回路とを有している。



【特許請求の範囲】

【請求項1】 センターサーバに格納された複数の着信音のなかから利用者が所望の音を選択するための選択手段と、

この選択手段により選択された着信音の曲データを、通信網を介して前記センターサーバから得るための通信手段と、

この通信手段から得られた曲データに従って着信音を発音する発音手段と、を具備することを特徴とする個人用機器。

【請求項2】 前記通信手段から得られた曲データを恒久的に記憶する曲データ記憶手段をさらに具備することを特徴とする請求項1に記載の個人用機器。

【請求項3】 本体装置に対して着脱自在に取り付けられ、着信音の曲データが記録された曲データ記憶媒体を備えたオルゴールチップと、

本体装置に設けられ、前記オルゴールチップの曲データ記憶媒体から曲データを読み出すとともに当該曲データに従って着信音を発音する発音手段と、を具備することを特徴とする個人用機器。

【請求項4】 本体装置に対して着脱自在に取り付けられ、着信音の曲データが記録された曲データ記憶媒体と、当該曲データ記憶媒体から曲データを読み出すとともに当該曲データに従って着信音を発音する発音手段と、を備えたオルゴールチップを具備することを特徴とする個人用機器。

【請求項5】 前記着信音の曲データは、少なくとも音の高低及び強弱及び長短のいずれかを定めるデータであることを特徴とする請求項1又は2又は3又は4のいずれかに記載の個人用機器。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明は、個人用情報端末（PDA: Personal Digital Assistance）あるいは携帯電話機など、主に携帯して使用することが可能な個人用機器に関する。

【0002】

【従来の技術】従来から知られているこの種の個人用機器においては、当該機器の利用者に対する電子メールの着信通知、あるいはページャー呼出しの着信通知等を可聴音によって通知する、いわゆる着信通知機能を有している。当該機能は、より広義には振動（バイブレーション）による着信通知機能を含んでいる。

【0003】この種の個人用機器を例えば屋外にて使用するような場合において、特に、同一機種の個人用機器の所有者が周囲に大勢いるような状況では、いずれの所有者の機器においても同一の着信音が鳴音することになる。したがって着信の際には何れの機器が鳴音しているのか判別し難い。そこで従来の個人用機器では、複数種の着信音を予め組み込んでおき、その中から着信音の種

類を選択することによって着信音を変更できるようにしている。

【0004】

【発明が解決しようとする課題】上述したような従来の個人用機器には、次のような問題点がある。すなわち、利用者が選択可能な着信音の種類は、その機種の仕様等に応じて予め組み込まれたものに限定されてしまう。このため、状況あるいは嗜好に応じた多種多様な着信音を使用したいという利用者からの要望に応じることができないという問題点がある。

【0005】したがって本発明は、多種多様な着信音のなかから所望の音を利用者が選択することができ、選択された着信音に容易に変更可能な個人用機器を提供することを目的とする。

【0006】

【課題を解決するための手段】上記課題を解決し、目的を達成するために本発明の個人用機器は、以下のような手段を備えている。

（1）本発明の個人用機器は、センターサーバに格納された複数の着信音のなかから利用者が所望の音を選択するための選択手段と、この選択手段により選択された着信音の曲データを、通信網を介して前記センターサーバから得るための通信手段と、この通信手段から得られた曲データに従って着信音を発音する発音手段と、を具備することを特徴とする。

【0007】この構成によれば、選択手段により選択された利用者の好みの着信音の曲データを、センターサーバから通信手段を介して得ることができる。そして得られた曲データに従って発音手段により着信音の発音が行われる。すなわち、センターサーバから取得可能な多種多様の着信音を選択して容易に変更することが可能となる。なお、通信手段から得られた曲データを一時的に記憶する例えば揮発性メモリーを備えることが望ましい。

（2）本発明の個人用機器は、上記（1）に記載の装置であって、且つ前記通信手段から得られた曲データを恒久的に記憶する曲データ記憶手段をさらに具備することを特徴とする。

【0008】この構成によれば、センターサーバからダウンロードされた曲データを恒久的に記憶することができるので、同一の着信音を何度も発音する場合に、センターサーバから曲データをその都度得る必要がない。

（3）本発明の個人用機器は、本体装置に対して着脱自在に取り付けられ、着信音の曲データが記録された曲データ記憶媒体を備えたオルゴールチップと、本体装置に設けられ、前記オルゴールチップの曲データ記憶媒体から曲データを読み出すとともに当該曲データに従って着信音を発音する発音手段と、を具備することを特徴とする。

【0009】この構成によれば、異なる着信音の曲デー

タが記録された曲データ記憶媒体を備えた多種多様のオルゴールチップが提供されることにより、利用者は好みのオルゴールチップを用意することができる。オルゴールチップは本体に対して容易に着脱可能であるので、好みの着信音を電池交換と同程度の手軽さで使い分けることができる。

(4) 本発明の個人用機器は、本体装置に対して着脱自在に取り付けられ、着信音の曲データが記録された曲データ記憶媒体と、当該曲データ記憶媒体から曲データを読み出すとともに当該曲データに従って着信音を発音する発音手段と、を備えたオルゴールチップを具備することを特徴とする。

【0010】この構成によれば、異なる着信音の曲データが記録された曲データ記憶媒体と、この曲データに従って異なる音色で着信音を発音する発音手段とを備えた多種多様のオルゴールチップが提供されることにより、利用者は好みのオルゴールチップを用意することができる。オルゴールチップは本体に対して容易に着脱可能であるので、好みの着信音を電池交換と同程度の手軽さで使い分けることができる。

【0011】

【発明の実施の形態】以下、図面を参照しながら本発明の個人用機器の実施形態を説明する。

(第1実施形態) 図1は、本発明の第1実施形態に係る個人用機器の外観を示す図である。本実施形態の個人用機器は、上述した個人用情報端末(PDA: Personal Digital Assistance) 20と携帯電話機30とがコネクタ22、24及びケーブル23を介して接続されて構成されている。個人用情報端末20は、ペンタuchスクリーン21を有しており、このスクリーン21を介して高機能で操作性の高いユーザーインターフェースが実現される。

【0012】この個人用情報端末20には、個人情報効率良く管理するための機能、いわゆるPIM機能が搭載されている。当該PIM機能は、タスク・スケジュール管理、簡単な顧客データベース、そして電子メールといった種々の機能から成る。特に本実施形態の装置20は、電子メール機能において、新たなメールの着信通知を可聴音によって通知するための着信通知機能を有している。そのために、着信音を鳴音させるためのスピーカ28を内蔵している。

【0013】図2は、本発明の第1実施形態に係る個人用機器の概略構成を示すブロック図である。個人用情報端末装置20は、センターサーバ50に格納された多種多様な着信音のなかから利用者が所望の音を選択するための選択手段(不図示)と、この選択手段により選択された着信音の曲データを、ネットワーク(ここでは移動体電話網、携帯電話網)を介してセンターサーバ50からダウンロードするための通信装置(ここでは携帯電話機)30と、この通信装置30から得られた曲データを

一時的に記憶する例えば揮発性メモリからなる曲データメモリ25と、この曲データメモリ25に記憶された曲データに従い、着信音を発音する発音回路29とを有している。CPU26は装置全体の動作を司る。なお、センターサーバ50から得られた曲データを恒久的に記憶する曲データ記憶手段を備えても良い。この場合は、同一の着信音を何度も発音する場合に、センターサーバ50から曲データをその都度得る必要がないという利点がある。

10 【0014】上記選択手段は、CPU26により実行可能なソフトウェアにより実現され、これによりペンタuchスクリーン21を介してセンターサーバ50上において選択可能な多種多様な着信音の一覧(好みのメロディー、)を表示することができる。ここでの表示を見ながら利用者は当該スクリーン21を操作して所望の着信音を選択することができる。

20 【0015】センターサーバ50から通信装置30を介してダウンロードされる曲データは、着信音を構成する各音の少なくとも高低及び強弱及び長短のいずれかを定めるものである。ただし、着信音の質、種類を比較的簡素なものとする場合は、例えば音の高低(ピッチ)のみを曲データとし、これによりデータ量の削減を図っても良い。

30 【0016】以上のように構成された本実施形態によれば、選択手段により選択された利用者の好みの着信音の曲データが、センターサーバ50から通信装置30を介してダウンロードされて曲データメモリ25に記憶保持される。そして発音回路29により曲データメモリ25に記憶されている曲データが読み出され、当該データに従って着信音の発音が行われる。すなわち、センターサーバ50からダウンロード可能な限り多種多様な着信音を選択して容易に変更することが可能となる。

40 【0017】このため、利用者が選択可能な着信音の種類が、その機種仕様等に応じて予め組み込まれたものに限定されることがなく、状況あるいは嗜好に応じた多種多様な着信音を使用したいという利用者からの要望に応じることができる。

50 【0018】したがって、多種多様な着信音のなかから所望の音を利用者が選択することができ、選択された着信音に容易に変更可能な個人用機器を提供できる。なお、個人情報端末装置20は上記した構成に限定されない。例えば図3に示すように、通信装置30を具備しない代わりに、サーバ40に対してコネクタ22、24及びケーブル23を介して直結する構成とし、このサーバ40から有線で曲データを転送するようにしても良い。

【0019】(第2実施形態) 図4は、本発明の第2実施形態に係る個人用機器の外観を示す図である。同図に示すように、本実施形態の個人用機器は、ペンタuchスクリーン11を有し、第1実施形態のものと同様のユー

ザーインターフェース及び当該インターフェースを利用するPIM機能を有する個人情報端末装置10により構成されている。

【0020】本実施形態の個人情報端末装置10は、第1実施形態とは異なり、センターサーバ等から着信音の曲データをダウンロードするための通信装置を具備しない。その代わりに、当該個人情報端末装置10に対し自在に着脱可能であって、スピーカ15を内蔵した着信信号発音部（オルゴールチップ）12を備えている。

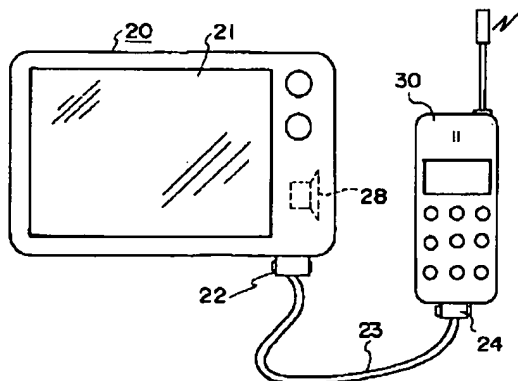
【0021】図5は、個人情報端末装置10の概略構成を示すブロック図である。同図に示すように個人情報端末装置10は、曲データ記憶媒体である曲データROM13と、スピーカを含む発音回路15とからなるオルゴールチップ12が、メイン基盤14に対し着脱自在に接続される構成となっている。

【0022】このように構成された本実施形態によれば、異なる着信音、すなわち異なる曲データに従って異なる音色の着信音を発音可能な多種多様のオルゴールチップ12を容易に提供でき、利用者は好みのオルゴールチップ12を選択することができる。オルゴールチップ12は本体に対して容易に着脱可能であるので、好みの着信音を電池交換と同程度の手軽さで使い分けることができる。例えば、子供が寝ている夜間にはソフトな着信音を使用し、屋外に出る場合は強力な音のものに差し替えるといった利用法が実現される。

【0023】なお、上記オルゴールチップ12内の発音回路15は、メイン基盤14を含む本体装置側に設けられていても良い。この場合は、着信音の音色等が発音回路15に限定されるが、オルゴールチップ12のコストを軽減できる。

【0024】かくして第2実施形態によれば、第1実施形態と同様に、利用者が選択可能な着信音の種類が、その機種仕様等に応じて予め組み込まれたものに限定されることがなく、状況あるいは嗜好に応じた多種多様の着信音を使用したいという利用者からの要望に応じ得る。

【図1】



【0025】したがって、多種多様な着信音のなかから所望の音を利用者が選択することができ、選択された着信音に容易に変更可能な個人用機器を提供できる。なお、本発明は上述した実施形態に限定されず、種々変形して実施可能である。

【0026】

【発明の効果】以上説明したように本発明によれば、多種多様な着信音のなかから所望の音を利用者が選択することができ、選択された着信音に容易に変更可能な個人用機器を提供できる。

【図面の簡単な説明】

【図1】本発明の第1実施形態に係る個人用機器の外観を示す図。

【図2】本発明の第1実施形態に係る個人用機器の概略構成を示すブロック図。

【図3】本発明の第1実施形態に係る個人用機器の他の構成例の外観を示す図。

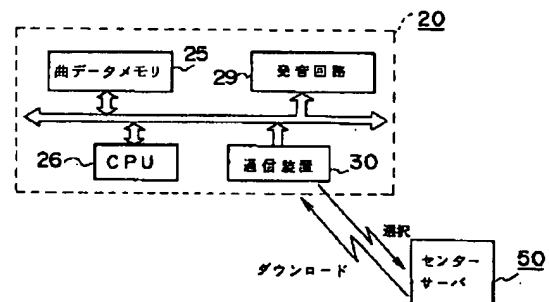
【図4】本発明の第2実施形態に係る個人用機器の外観を示す図。

【図5】本発明の第2実施形態に係る個人用機器の概略構成を示すブロック図。

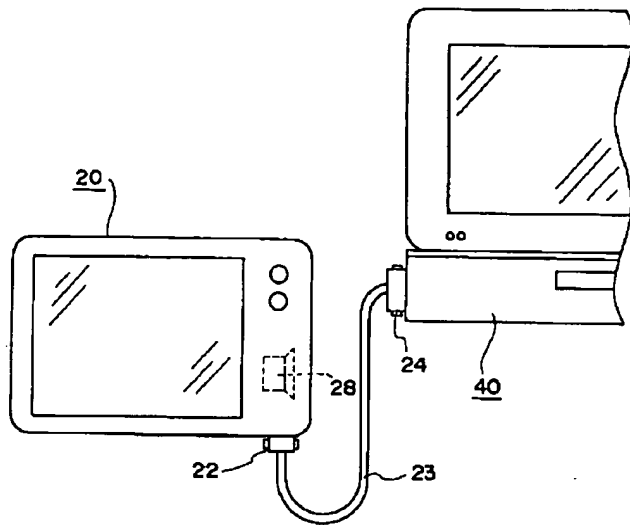
【符号の説明】

- 10、20…個人情報端末装置
- 11、21…ペンタタッチスクリーン
- 12…オルゴールチップ
- 13…曲データROM
- 14…メイン基盤
- 15…発音回路（スピーカ）
- 22、24…コネクタ
- 23…ケーブル
- 25…曲データメモリ
- 26…CPU
- 29…発音回路
- 30…通信装置（携帯電話機）
- 50…センターサーバ

【図2】

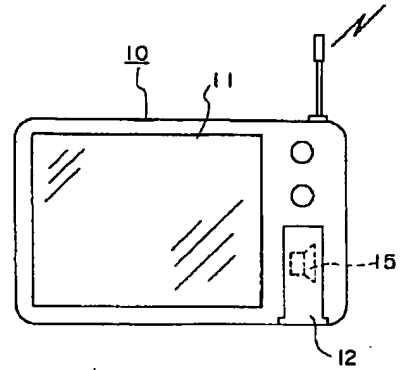


【図3】

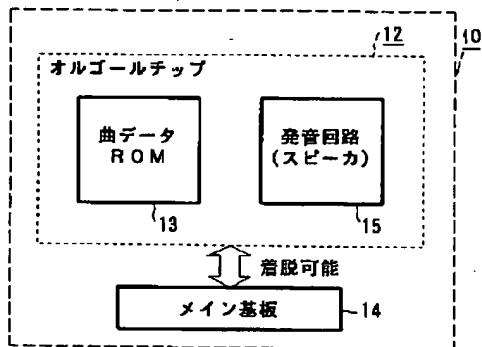


【図4】

【図4】



【図5】



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